

# **Bradbury Beach Facility Improvements**

**Proposed by**

**The National Park Service**

## **Environmental Assessment**

**December 19, 2002**

**Comments must be received by 4:00 p.m., January 24, 2003**

**Address comments to:**

**Lake Roosevelt National Recreation Area  
1008 Crest Drive  
Coulee Dam, Washington 99116**

**UNITED STATES DEPARTMENT OF INTERIOR-NATIONAL PARK SERVICE -PACIFIC WEST REGION**

## **1.0 Introduction**

Coulee Dam National Recreation Area was established in 1946 by the Secretary of the Interior's approval of a Tri-Party Agreement which included the National Park Service (NPS), Bureau of Reclamation (BOR), and the Bureau of Indian Affairs (BIA). NPS operations under such agreements are authorized by P. L. 79-633. The reservoir and related lands were administered under the 1946 management agreement until 1974 when Interior Secretary Rogers C.B. Morton directed that the agreement be expanded to include the Colville Confederated Tribes (CCT), and the Spokane Tribe of Indians (STI). In 1990, the "Lake Roosevelt Management Agreement" was approved by the Secretary of the Interior. This agreement signed by the BOR, NPS, BIA, STI and CTT, confirmed the roles and the areas of management responsibility for the various parties. The agreement acknowledges that Lake Roosevelt National Recreation Area (LRNRA) is a unit of the national park system.

Lake Roosevelt, the primary feature of LRNRA, is about 154 miles long along the main stem of the Columbia River and extends from the dam site at Grand Coulee, Washington, to the Canadian Border. At full pool the surface elevation is 1,290 feet, the surface area is about 81,389 acres, and the total shoreline is about 513 miles.

The developed areas that the NPS manages for the public include: 22 boat launch ramps with adjacent parking lots, 27 campgrounds (17 drive-in and 10 boat-in) containing 640 individual sites, as well as several group campsites, swim beaches, three concessionaire-operated marinas that provide moorage, boat rental, fuel, supplies, sanitary facilities, and other miscellaneous services. The park has three administrative sites: Headquarters at Coulee Dam, the South District Office at Fort Spokane, and the North District Office at Kettle Falls.

## **1.1 Summary**

The Bradbury Beach Facility Improvements Plan describes specific actions for implementing the broad management strategies identified in the Lake Roosevelt National Recreation Area General Management Plan (GMP), approved in 2000. The GMP gives direction to the NPS for the management of LRNRA, including the types and locations of facilities to be provided. The plan encourages a full range of recreational activities, including: camping, picnicking, playgrounds, boating, fishing, swimming, water skiing, sightseeing and learning about LRNRA and its cultural and natural resources. Expansion of existing concession facilities and services are also allowed where it is consistent with the GMP. Dispersing recreation around LRNRA to relieve congestion in heavily used areas and when it is economically feasible is a major recommendation in the GMP.

The proposed site improvement plan tiers off the GMP and associated Environmental Impact Statement (EIS), which underwent extensive public review. In addition, scoping

on the Development Concept Plan (DCP) was conducted with the Stevens County Commissioners.

## **1.2 Purpose and Need**

**Purpose of Action:** The current facilities at Bradbury Beach are considered inadequate in regards to parking and the over-all facility design. Bradbury Beach is considered to be a popular beach for visitors of all ages. The site is heavily used for water associated recreation, day use, boat launching, fishing and its broad swimming beach. Presently the swim beach is often overcrowded on summer weekends, warranting expansion of the beach area as well as the log boom system. The existing parking design does not complement the swim area and needs to be redesigned to increase parking capacity and improve traffic flow. The project at Bradbury Beach is located at Township 35N, Range 37E, of the NW ¼ of the SW ¼ of Section 22, of Stevens County. (See Vicinity Map).

The facilities at Bradbury Beach were primarily constructed in the late 1960's, when visitor use within LRNRA was estimated to be about 100,000 visitors. Annual visitation is currently about 1.4 million (NPS, 2000), and that is expected to increase in the future. Visitor surveys show that visits to Bradbury Beach have risen from 16,151 in 1993 to a five year average of 28,873 between 1996 and 2000. During the peak months of July and August, Bradbury Beach attracted over 10,000 visitors per month on several occasions during this five year span. As called for in the GMP, overnight camping at the four-site campground is no longer permitted. The former campground has been converted to a day use picnic area.

The existing facilities have user hours from 5:00 a.m. to 11:00 p.m., with seasonal use from mid-May to mid-September and "off-season use" consisting mostly of fisherman from mid-September to mid-May. The majority of visitation occurs from late spring to early fall. Day use accommodations at the 6.5-acre site consist of 3 designated picnic sites, a sandy beach, a major boat-launching ramp, and a day use/beach area. A vault toilet and two pit toilets serve the boat launch, day use and picnic areas.

The boat launch area consists of a 28' wide boat launch and courtesy docks accessible to elevation 1251', fee station, vault toilet, garbage refuse, and a gravel parking lot that accommodates 10 to 12 vehicles with boat trailers (depending on parking orientation). According to visitation statistics, an average of ten boats were launched per day in the month of August from 1998 to 2001. Verified by site visits, however, it is common to have the majority of these uses during the weekend, often with over 30 vehicles with boat trailers parked in this area. There is currently no designated boat tie-up area, and vehicular circulation is repeatedly misused due to lack of signage, barriers, and an inadequate number of designated parking stalls.

The day use/swim beach area consists of a swim beach with a swim float enclosed by a log boom system, native grasses that are managed bimonthly during the growing season, an unmodified trail to the swim beach, native shade trees, pit toilet, and a gravel parking lot that accommodates about 22 vehicles (depending on vehicle orientation). The swim beach area is immediately south of the designated picnic area, which consists of three picnic sites, trail system, courtesy dock, pit toilet, and a dead-end parking lot that accommodates approximately 6 vehicles and serves as a turn-around for vehicles leaving Bradbury Beach.

The current park and facilities design does not fully meet visitor needs. Visitor use often exceeds the carrying capacity of Bradbury Beach during the summer months, creating congestion, resource degradation, and enforcement problems. Vehicular traffic flow is also a concern because of narrow roads, lack of signage, and limited visual barriers. An improved layout of picnic sites, parking areas, roads and trails, and accessibility improvements would enhance visitor enjoyment while providing a more functional day use area. The planning effort for Bradbury Beach is intended to ensure the orderly expansion of recreational facilities in order to meet the increasing public demand while distributing visitor use more evenly at facilities within LRNRA. This Environmental Assessment describes the existing conditions, a proposed action and an alternative development proposal and their associated impacts.

### 1.3 Impact Topics

Specific impact topics have been identified to address potential natural and cultural impacts that might result from the proposed improvements. The topics are used to focus the information presented and discussed in the affected environment and the resulting environmental consequences. A brief rationale for the selection of each is given below.

**1.31 Cultural Resources:** Section 106 of the National Historical Preservation Act calls for conducting site evaluations in the area of potential affect. Ground disturbance by tree removal, ground excavation for boat trailer and vehicle parking, road improvements, vault toilet installations, beach expansion, picnic area and parking improvements would be considered a potential impact.

**1.32 Vegetation:** The National Environmental Policy Act of 1969 (NEPA) calls for examination of the impacts on the components of affected ecosystems. NPS policy is to generally protect the natural abundance and diversity of all of the park's naturally occurring communities. These facility improvements would displace a selected amount of ponderosa pine trees (*Pinus ponderosa*), service berry (*Amelanchier alnifolia*) and choke cherry (*Prunus virginiana* var. *melanocarpa*) bushes, wild rose (*Rosa canina*), oregon grape (*Berberis aquifolium*), idaho fescue (*Festuca sp.*), fireweed (*Epilobium angustifolium*), yarrow (*Achillea millefolium*) and other non native grasses and forbes. No known sensitive plants species are present on the project site area.

**1.33 Sensitive Species:** In consultation with the U.S. Fish and Wildlife Service, two animal species, and one plant species were identified that needed to be addressed in this document<sup>i</sup>. These are bald eagle (*Haliaeetus leucocephalus*), bull trout (*Salvelinus confluentis*), and ute ladies'-tresses (*Spiranthes diluvalis*).

The NPS conducted a plant survey in 2002 (Scott Hebner) of the project area and determined that no known listed, proposed, or candidate plant species exist on the proposed site.

**1.34 Wildlife:** Another component of the affected ecosystem is the wildlife that uses the proposed site. NPS policy is to protect natural abundance and diversity of all of the park's naturally occurring communities. The existing development areas were previously graded and cleared as part of the original development. This area is utilized by various wildlife species, some use is dependent on the season. Some common animal species may include: mammals-mule deer (*Odocoileus hemionus*), coyote (*Canis latrans*), northern pocket gophers (*Thomomys talpoides*), mice (*Peromyscus sp.*); birds-black billed magpie (*Pica pica*), bald eagle (*Haliaeetus leucocephalus*), and osprey (*Pandion haliaetus*).

**1.35 Soils:** The soil within the project area is Bisbee loamy fine sand ranging from 0-45% slopes. This is a very deep, somewhat excessively drained soil on terraces along the Columbia River. It formed in windworked, sandy outwash material. The average annual precipitation is about 18 inches. The permeability of this Bisbee soil is rapid, and the available water capacity is moderate. The effective rooting depth is 60 inches or more. Loose footing, sandy surface layer and steepness of slopes limit the use of machinery. The proper design of road drainage systems and care in the placement of culverts help to control erosion on this soil. The soil characteristic in regards to septic tank absorption fields is severe due to very rapid permeability in the substratum and steepness of slope. The contamination of groundwater supplies as a result of seepage is a possibility. This soil has poor water management characteristics due to its high permeability. It is poorly suited for irrigation, etc. due to droughty conditions.

## **2.0 Description of Alternatives**

### **2.1 (Environmentally Preferred Alternative) Alternative A: (No Action) No improvements of facilities at Bradbury Beach.**

Under the no action alternative, the NPS day use facility would remain as is. Bradbury Beach would still function as a day use only facility, but continue to be crowded during peak use periods, preventing the facility to function efficiently. Other than sign replacement and similar preventive maintenance projects, there would be no change in the site layout or the existing road and trail network. Park natural resources would not receive additional protection.

## **2.2 Alternative B: (Preferred Action) Facility Improvements proposed by the NPS.**

This proposed action, depending on clearance, is planned to begin in the spring of 2003. Most of the construction would be performed during the low use season from October to May, and to avoid the period of wintering eagle nesting from late November through February. Five eagles have been counted in the mid-winter surveys in the last 4 years within 800 meters of the project area. The Pacific Northwest Bald Eagle Recovery Plan recommends an 800 meter buffer for all disturbing activities that may affect roosting bald eagles. Facility closure would be required during part of the construction process to ensure safety to park users.

The proposed facility improvements would have four areas of construction within the project site.

The first project will involve improving and expanding the existing boat launch parking lot (see Plan Sheets 1&2). The access road, from the day use intersection to the boat launch (approximately 200'), will be widened to allow for two-way traffic. Fill material will be used from the upper parking lot to widen the road from 12-15' to 20' with a 2' road shoulder on each side. Existing vegetation along the road, along with the depth of fill needed to bring it up to grade, will determine which side of the road to widen, thus avoiding the removal of any mature pine trees. The road will have a compacted gravel surface until asphalt can be provided through future funding.

Due to the rock material below the grade of the existing parking lot, the slope of the existing parking lot will remain. This will require the two designated handicap parking stalls to be located in the middle of the existing parking lot to comply with all Americans with Disabilities Act (ADA) standards. The proposed parking lot will be two-tiered, with a one-way road loop (20' wide road with a 3' shoulder on each side) between the two lots. The existing lower lot will be expanded to the south, providing sixteen 10'x36' parking stalls. The lower lot expansion will be accomplished by using cut material from the upper lot for fill, with a balance point near the center of the road loop. The toe of the fill slope will be a minimum of 15 linear feet from the high water mark.

The upper parking lot is proposed to be constructed by grading the 165'x70' lot to a 1-2% slope for drainage. This will involve removing approximately 1,700 cubic yards of material. This material would be used as fill for the lower lot, and excess material would be used on the entrance road widening project. The upper parking lot would provide fifteen 10'x36' parking stalls and a 24' wide, one-way exit road to the north. A 2:1 slope at the east side of the upper parking lot is required to eliminate the need to disturb the Historic Fruitland Irrigation Canal. This will also enable the recommended 10' buffer from the toe of the existing berm to the proposed construction area to remain. Approximately twenty small (5-12" DBH) ponderosa pine trees and one cherry tree will be removed due to construction of the upper parking lot. Pending future surface

improvements, the proposed gravel parking lot will designate the orientation of (31) stalls by locating 6' curb stops accordingly. A small drainage swale at the toe of each slope will provide proper drainage, and direct run-off water south to the existing vegetated draw to the south. Indigenous landscape rocks (+/- 300 lbs.) will be used as barriers around the proposed loop road and where needed to abolish parking and driving in undesignated areas. Signage will be added where needed to: direct traffic flow, designate handicap parking, and locate the boat tie-up area. The proposed parking lot improvements at the boat launch will nearly triple the carrying capacity of the existing lot. The improvements achieve some of the goals identified in the GMP, such as: making existing facilities function more efficiently, distributing visitor use more evenly at facilities within LRNRA, and increasing visitor experiences within LRNRA.

The second area of construction is at the swim beach and vicinity (see Plan Sheet 3). The swim beach itself is the main attraction to many of the visitors. The beach provides ample space when the water is at elevation 1280' or below, but gets congested from 1280' to full-pool (1290'). The amount of available beach declines as the water level rises to full-pool, at which point no beach exists. The managed landscape around the swim beach is primarily native fescue that is mowed once or twice a month during the summer. This area receives full-sun exposure, has a lack of irrigation, and a steep sloped condition. The proposed improvements at the swim beach area include: pruning the dead limbs and removing some of the undergrowth vegetation on the canopy trees adjacent to the swim beach, replacing the pit toilet with a handicap accessible vault toilet, providing improved trails to the swim beach, reorienting the existing parking lot and exit road, and removing the existing water hand pump.

The existing trees adjacent to the swim beach include a mixture of: locust (*Robinia sp.*), black cottonwood, (*Populus trichocarp*), poplar (*Populus tremuloides*) and an occasional cherry tree (*Prunus sp.*). Some of these trees will be pruned or cut to increase visitor safety. Islands of undergrowth vegetation will remain under the existing group of trees, providing some privacy to visitors while maintaining a diverse plant community. A vegetation buffer will remain on the south side of these trees to help eliminate noise, visual disturbance, and dust from the parking lot. A maintained native grass path (approximately 10' wide) just to the south of this buffer will link the existing day use area to the proposed path from the parking lot. Picnic tables will be added around the created vegetation islands to better accommodate visitors.

The current parking lot serving the swim beach and vicinity accommodates 22-23 vehicles. The lot is often over-full on the weekends from May to September, requiring visitors to park off-road and along the narrow access road. The parking lot will be redesigned to accommodate 37 vehicles, including two stalls designated as handicap parking only. This will be accomplished by expanding the lot 75' to the south and realigning the exit road. The water hand pump system (which has not been in operation since June, 1997 because of high levels of iron) would be removed, allowing the exit road to intersect the main road accordingly. Approximately 50 cubic yards of fill material will

be needed to keep the proper grade. This material can be moved during construction of the boat launch parking lot. Pending future surface improvements, the proposed gravel parking lot will designate the orientation of thirty-seven stalls by locating 6' curb stops accordingly.

An ADA compliant pedestrian path will be constructed from the parking lot to the south end of the swim beach. The path is 5' wide with a 1' shoulder on each side, and centrally located in the parking lot. The existing pedestrian path at the north end of the lot will remain unmodified. A handicap accessible vault toilet will be installed adjacent to the constructed path, with access from the north as well. The vault toilet will be located a minimum of 100' from the high water mark. Indigenous landscape rocks (+/- 300 lbs.) will be used as barriers where needed to abolish parking and driving in undesignated areas. Signage will be added where needed to direct traffic flow and designate handicap parking. The existing "Bradbury Beach" lakeside sign will be improved as needed, including removing vegetation in the immediate vicinity to provide a clear view from the lake.

Minor improvements will be made to the existing swim beach to the north of the core swim area. Small trees and shrubs below the high water mark will be removed. A small amount of beach sand (approximately 8 cubic yards) will be imported to fill an existing 4'x70' depression above the high water mark. This project will help link the swim beach to the existing picnic area and distribute visitor use more evenly throughout the site.

The third area of construction involves improving the existing picnic sites and parking area at the north sector of the site. The access road has a "dead-end" turn-around just to the east of the picnic sites, and pathways leading down to the sites. The parking lot slopes dramatically to the lake side and is pear shaped, creating parking confusion and congestion on busy days. The proposed improvements at the picnic sites include: parking lot expansion and improvements, trail system modification, replacing the pit toilet with a handicap accessible vault toilet, removing the courtesy dock, and vegetation management (see Plan Sheet 4).

The parking lot will be improved by grading the site level to elevation 1307' (the approximate low point of the existing lot). The excess cut material will be used in the entrance road widening project. Lowering the elevation of the lot allows the lot to be expanded approximately 60' to the north. This creates a more usable parking lot shape and enough space to accommodate 15 vehicles. Pending future surface improvements, the proposed gravel parking lot will designate the orientation of fifteen stalls by locating 6' curb stops accordingly. Indigenous landscape rocks (+/- 300 lbs.) will be used as barriers where needed to abolish parking and driving in undesignated areas. Signage will be added where needed to direct traffic flow and designate handicap parking.

At least one of the stalls in the improved parking lot will be designated as handicap parking only. A handicap accessible vault toilet will be installed adjacent to the



accessible stall. The vault toilet will be located a minimum of 100' from the high water mark. Also near the handicap only parking stall, the trail leading to the southern most picnic site will be improved to meet all ADA standards. Minor excavation work is required to meet the proper grade. A retaining wall is proposed on the uphill side of the path for slope stability and to reduce the number of visitors using the paths that cut straight down the slope. Minor excavation work is proposed at the existing picnic site to comply with all ADA standards. A handicap accessible picnic table and standing barbecue will be provided at this site. The remaining two picnic sites will require minor modifications, including: replacing the two fire rings with standup barbecues, trail improvements, and vegetation management.

The vegetation between the lake and the picnic sites poses a safety problem due to dead limbs and unhealthy trees. Removing the dead limbs and approximately 25% of the undergrowth vegetation and small trees would be included in this facility improvement project. This will maintain a buffer between the lake and the picnic sites, while providing the picnickers with a better view and access to the lake. It will also promote a healthier stand of trees, as the existing stand is competing for essential nutrients, sunlight and water. The park Natural Resource Specialist will assist in the selection process prior to construction.

The final area of construction is at the main entrance road at the intersection of Highway 25. The road comes off the highway, stays level for about 40' and goes down hill at a slope of approximately 6-8% until it reaches the intersection at the bottom of the hill. The road is between 16' and 18' wide at any given point, which is too narrow for two-way traffic. The road also has a 20-30' vertical (2:1) slope on both sides. The expansion project would require approximately 3,000 cubic yards of fill material. It is estimated that about half of this material will come from on-site projects. The rest of the fill will be imported from an off-site stockpile. Pending future improvements, the widened road will function with a compacted gravel base.

Construction and erosion control would be employed. The entire construction site would be fenced with a temporary fence to prevent inadvertent impacts to the surrounding vegetation and landscape by heavy equipment. Equipment refueling and maintenance would occur in locations to avoid accidental spills from fouling the lake.

**Table 1. Construction Calculations for the Proposed Action Alternative**

| <b>Alternative B-Boat Launch Parking</b>   | <b>Calculations</b>   | <b># Of Sites/Amenities</b>  |
|--|---|--|
| Existing vehicle and trailer parking lot to be improved.   | 8,800 S.F. of compacted gravel  | (9) 10'x36' vehicle and trailer parking stalls, including (2) handicap only.                               |
| 100' parking lot extension, south from the existing parking lot, including shoulders and drainage swale.                   | 5,800 S.F. of compacted gravel  | (7) 10'x36' vehicle and trailer parking stalls with one-way traffic flow.                                  |
| Road loop from parking lot expansion to the upper tier parking lot. 24' wide road with 3' shoulder.                        | 4,200 S.F. of compacted gravel.   | Vehicular access to upper tier parking lot.  |
| Upper tier vehicle and trailer parking lot.  | 10,100 S.F. of compacted gravel.  | (15) 10'x36' vehicle and trailer parking stalls with one-way traffic flow.                                 |
| Exit road from upper tier parking lot. 20' wide roadway with 3' shoulder.  | 2,700 S.F. of compacted gravel.   | Vehicular exit from upper and lower parking lot.   |
| <b>Boat Launch Parking</b>   | <b>TOTAL:</b><br>31,600 S.F. of compacted gravel                              | <b>TOTAL:</b><br>(31) 10'x36' vehicle and trailer parking stalls with associated trail and vault toilet.   |
| <b>Alternative B-Swim beach and vicinity</b>   | <b>Calculations</b>   | <b># Of Sites/Amenities</b>  |
| Parking lot extension, south from the existing parking lot, including reoriented exit road.                                | 5,500 S.F. of compacted gravel.   | (14) Vehicle parking stalls and one-way exit road.   |
| Existing parking lot to be improved, including entrance road.  | 7,500 S.F. compacted gravel.  | (23) Vehicle parking stalls, including (2) handicap only stalls.   |
| Trail system from the parking lot to the swim beach. 5' wide with a 1' wide shoulder on each side.                         | 2,400 S.F. asphalt  | ADA compliant trail with associated parking and vault toilet.  |
| <b>Swim beach and vicinity</b>   | <b>TOTAL:</b><br>13,000 S.F. of compacted gravel. 2,400 S.F. asphalt          | <b>TOTAL:</b><br>(37) 8.5'x18' vehicle parking stalls with associated trail system and vault toilet.       |
| <b>Alternative B-Picnic area parking and vicinity</b>  | <b>Calculations</b>   | <b># Of Sites/Amenities</b>  |
| Grade existing parking lot to be ADA compliant.  | 10,600 S.F., remove asphalt, grade level and replace w/ compacted gravel.     | (7) 8.5'x18' vehicle parking stalls including (1) handicap only stall.                                     |
| Expand parking lot to the north.   | 2,600 S.F. of compacted gravel.   | (8) 8.5'x18' vehicle parking stalls.   |
| Trail system from the parking lot to the improved ADA compliant picnic site. 5' wide with a 1' wide shoulder on each side. | 850 S.F. of asphalt.<br>700 S.F. of compacted crushed granite at picnic site. | ADA compliant trail with associated parking, vault toilet and picnic site.                                 |
| <b>Picnic area parking and vicinity</b>  | <b>TOTAL:</b><br>14,750 S.F. of improved area.                                | <b>TOTAL:</b><br>(15) Vehicle parking stalls with associated trail systems, vault toilet and picnic sites. |
| <b>Alternative B-Entrance road and intersection</b>  | <b>Calculations</b>   | <b># Of Sites/Amenities</b>  |
| Widen entrance road from 16' to 18' wide to 24' wide with a 3' shoulder on each side.                                      | 3,800 S.F. of improved area, requiring 3,000 CU YDS of fill material.         | A two-way road that is functional and safe to park visitors.   |

### **2.3 Alternative C: Action Considered but Rejected**

An alternative design for Bradbury Beach facility improvements was considered but rejected due to increased resource, cultural, and visual impacts. Alternative C would include the same four areas of construction as the preferred alternative, but would add over 10,000 SF of parking, remove an additional 20 trees, and disturb the historic Fruitland Irrigation Canal. The design of the day use parking lot would be oriented toward the lake, eliminating the existing vegetation that serves as a visual screen from the lake. The picnic area parking lot would be improved only by providing barriers, striping, and signage, allowing the current congestion problem to continue.

### **2.4 Environmentally Preferred Alternative**

The preferred alternative describes actions the NPS has proposed to carry out. A final decision whether to adopt this or another of the alternatives will be based upon the analysis contained within this document and additional information obtained as a result of the public review process.

The environmentally preferred alternative is the alternative that will best promote the objectives of the National Environmental Policy Act (NEPA). These objectives<sup>ii</sup> include:

- Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations.
- Ensure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings.
- Attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences.
- Preserve important historic, cultural, and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice.
- Achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities.
- Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

Alternative A would be considered by the NPS as the environmentally preferred alternative. Alternative A is proposing that no action takes place, which would not permanently remove 1.26 acres of vegetation. There would, however, continue to be some damage to vegetation along the edge of the road due visitors parking in undesignated areas. This alternative also excludes the benefit of diverting visitor usage from the southern portion of the park to other, less crowded day use areas such as Bradbury Beach.

### 3.0 Affected Environment

Because both action alternatives occupy the same area, the following description of the affected environment applies to both alternatives.

**3.1 Cultural Resources:** In recognition of the NPS obligation to protect cultural resources, a literature review and an archaeological survey of the project area was completed to determine if any impacts to cultural, archaeological, or historical resources would occur from the proposed activity. An archaeological survey<sup>iii</sup> was conducted by Ray Depuydt (park archaeologist) on the proposed NPS construction sites.

The NPS is currently conducting a literature search to determine if any specific historical features found at the southwest corner of the proposed swim beach parking lot expansion project have any significant merit to the project development. The results of this search will determine the outcome of the parking lot project within the 30 day comment period.

**3.2 Vegetation:** The project areas are encompassed within the transition ponderosa pine zone, a zone with a variety of associated shrubs and grasses that are adapted to this semi-arid environment. Other tree species are limited on the uplands due to temperature and aridity. Along the waters edge is a small riparian zone and spread throughout the area are various exotic tree species related to past cultural activities on the site.

The pine forest in the area was impacted by a wildfire in the early 1970's and many of the ponderosa pines in the area have grown up since this disturbance. In some places the forest is a dense stand of young trees. An additional conifer present in minor quantities is the douglas fir. Associated shrubs in the pine forest include service berry (*Almenanchier alnifolia*), deer brush ceonothus (*Ceanothus integerrimus*), black hawthorn (*Crataegus douglasii*), blue elderberry (*Sambucus cerulean*), and common snowberry (*Symphoricarpos albus*). These are all common to the ponderosa pine forests of LRNRA.

Grasses and herbs are a major component of ponderosa pine forests. Common grasses include: bluebunch wheatgrass (*Agropyron spicatum*), sheep fescue (*Festuca ovina* var. *rydbergii*), scribner witchgrass (*Panicum scribnerianum*), needle-and-thread (*Stipa comata*), and small needlegrass (*Stipa occidentalis* var. *minor*). Major herbs include: yarrow (*Achillea millefolium* ssp. *lanulosa* var. *lanulosa*), showy milkweed (*Asclepias speciosa*), fireweed (*Epilobium angustifolium*), columbia puccoon (*Lithospermum ruderae*), and woolly plantain (*Plantago patagonica*). Common exotic species include grasses: smooth brome (*Bromus inermis*), crested wheatgrass (*Agropyron cristatum*), intermediate wheatgrass (*Agropyron intermedium*), bulbous bluegrass (*Poa bulbosa*), and kentucky bluegrass (*Poa pratensis*); Herbs: white and yellow sweetclover (*Melilotus* sp.), forget-me-not (*Myosotis* sp.), and buckhorn plantain (*Plantago lanceolata*). Invasive species include grasses: japanese brome (*Bromus japonicus*) and cheat grass (*Bromus tectorum*); herbs: diffuse and spotted knapweed (*Centaurea* sp.), saint john's wort

(*Hypericum perforatum*), dalmation toadflax (*Linaria dalmatica*), tumble mustard (*Sisymbrium altissimum*) and common mullien (*Verbascum thapsus*).

A riparian zone is present along the waters edge. The tree species associated with the riparian zone are more diverse. The most common tree in this zone is the black cottonwood (*Populus trichocarpa*). Other common species include quaking aspen (*Populus tremuloides*), pacific willow (*Salix lasiandra*), peach-leaf willow (*Salix amygdaloides*) and mountain alder (*Alnus incana*). This zone is lacking in many of the associated herbs and sedges probably due to its limited extent. A fern ally that is present is the Smooth scouring rush.

Several exotic trees are also found on site associated with historical use or more recently planted trees by the NPS. These include: silver maple (*Acer saccharinum*), domesticated cherry (*Prunus* sp.) and black locust (*Robinia pseudo-acacia*).

**3.3 Sensitive Species:** NPS Management Policies regarding sensitive species states: “The Service will survey for, protect, and strive to recover all species native to national park system units that are listed under the Endangered Species Act ... The National Park Service will inventory, monitor, and manage state and locally listed species in a manner similar to its treatment of federally listed species, to the greatest extent possible.”<sup>iv</sup>

In consultation with the U.S. Fish and Wildlife Service, two animal species and one plant species were identified that needed to be addressed in the document<sup>v</sup>. These are bald eagle (*Haliaeetus leucocephalus*), bull trout (*Salvelinus confluentis*) and ute ladies'-tresses (*Spiranthes diluvialis*).

Bald eagles regularly use Lake Roosevelt for nesting and mid-winter roosting. This site is intermittently visited by wintering bald eagles. The last four years of mid-winter bald eagle surveys (11 surveys) revealed five bald eagles roosting within 400 meters of the Bradbury Beach area during the winter. The work proposed in the Action Alternatives will be accomplished after late spring or in early fall. This will put the work activity outside of the mid-winter roosting period and thus no mid-winter roosting birds will be disturbed by work activities. None of the trees proposed to be removed in the Action Alternatives would make suitable communal roosts at this stage of their development.

Nesting bald eagles are 2.7 kilometers (1.7 miles) away, so that the work proposed by this project would be outside the recommended 800 meters (0.5 miles) direct line of site avoidance zone recommended in the Pacific Bald Eagle Recovery Plan<sup>vi</sup>. Since this work will be 3 times the recommended distance and will not involve any out of the ordinary work, this project would have no affect on nesting bald eagles at LRNRA.

In considering this information the NPS believes this project would have no effect on bald eagle populations of northeast Washington.

The bull trout, a threatened species, is not believed to reproduce or live in Lake Roosevelt, according to Spokane Indian Tribal Fisheries Biologists. Approximately three bull trout have been collected in Lake Roosevelt over the last decade and a half of intensive fish surveys conducted by the tribes and their associates (Underwood, 1997)<sup>vii</sup>. These surveys have collected thousands of fish, enough that the three bull trout captured do not make up a statistically significant portion of the overall abundance of fish species. Dr. Alan Sholtz, Eastern Washington University, with extensive fishery experience on Lake Roosevelt, believes that lake conditions, such as temperature, are not suitable for the long-term existence of bull trout. It is believed that the three fish captured were entrained into the system from upstream bodies of water above other dams. In considering this information, the NPS believes this project would have no effect on bull trout populations of northeast Washington.

No federally listed, proposed, or candidate plants are known to occur within LRNRA. The ute ladies'tresses (*Spiranthes diluvialis*) has never been confirmed in or immediately near Lake Roosevelt. This sensitive plant species is known to exist in non-forested environments subject to occasional disturbance in the flood plain environment. This project is not within a non-forested environment and is on an upland terrace that is not part of any floodplain. No floodplain areas are near the project area.

A survey of plants did not reveal any orchid like plants nor did it indicate habitat characteristics that would support the presence of this plant.

In considering this information, the NPS believes this project would have no effect on Ute ladies'-tresses populations of northeast Washington

**3.4 Wildlife:** Another component of the affected ecosystem is the wildlife that uses the proposed site. NPS policy is to protect natural abundance and diversity of all of the park's naturally occurring communities. The existing development areas were previously graded and cleared under the previous DCP, and the GMP of 1980. This area is utilized by various wildlife species; some use is dependent on the season.

A survey of potential wildlife on this site was not conducted but species dependent on ponderosa pine areas could be expected to be present at various times of the season. Some common animal species may include: the white-tailed deer (*Odocoileus virginianus*), coyote (*Canis latrans*), porcupine (*Erethizon dorsatum*), nuttall's cottontail (*Sylvilagus nuttallii nuttallii*), northern pocket gophers (*Thomomys talpoides*), mice (*Peromyscus sp.*), black billed magpie (*Pica pica*), oregon junco (*Junco oregonus*), bald eagle (*Haliaeetus leucocephalus*), osprey (*Pandion haliaetus*), gopher snake (*Pituophis melanoleucus*), and common garter snake (*Thamnophis sirtalis*).

**3.5 Soils:** The soil within the project area is Bisbee loamy fine sand ranging from 0-45% slopes. This is a very deep, somewhat excessively drained soil on terraces along the Columbia River. It formed in windworked, sandy outwash material. The average annual precipitation is about 18 inches. The permeability of this Bisbee soil is rapid, and the

available water capacity is moderate. The effective rooting depth is 60 inches or more. Loose footing, sandy surface layer and steepness of slopes limit the use of machinery. The proper design of road drainage systems and care in the placement of culverts help to control erosion on this soil. The soil characteristic in regard to septic tank absorption fields is severe due to very rapid permeability in the substratum and steepness of slope. The contamination of groundwater supplies as a result of seepage is a possibility. This soil has poor water management characteristics due to the high permeability. It is poorly suited for irrigation, etc. due to droughty conditions.

## 4.0 Impacts

**Methodology.** Potential impacts were analyzed for their context, intensity, and duration. The definitions of impact terms used in this section are:

Negligible: The impact is at the lower levels of detection.

Minor: The impact is slight, but detectable.

Moderate: The impact is readily apparent.

Major: The impact is severely adverse or exceptionally beneficial.

**Non-impairment.** No project is allowed to “impair” national park resources or values, according to the NPS Organic Act of 1916 and NPS Director’s Order #55. An action could have some impact, even a measurable or significant impact, but “impairment” is strictly prohibited. This project, under either alternative, would have impacts (e.g. dust, safety) but would not impair national park resources or values.

This section identifies the impacts of each alternative on the cultural and natural environment. Each impact topic will be analyzed as they relate to each alternative. This section describes the probable consequences (impact, effects) of each alternative on the resources discussed in section 1.2. If applicable this section will address the direct, indirect and cumulative impacts of each impact topic and each alternative. For each resource type, an assessment is also made whether the impacts associated with the alternatives would result in impairment of park resources. Impairment is defined in NPS Management Policies.

“The Impairment that is prohibited by the Organic Act and the General Authorities Act is an impact that, in the professional judgement of the responsible NPS manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values”. Whether an impact meets this definition depends on the particular resources and values that would be affected; the severity, duration, timing of the impact, the direct and indirect effects of the impact, and the cumulative effects of the impact in question and other impacts.

An impact to any park resources or value may constitute an impairment. An impact would be more likely to constitute impairment to the extent that it affects a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park.
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park's GMP or other relevant NPS planning documents.

An impact would be less likely to constitute an impairment to the extent that is an unavoidable result, which cannot reasonably be further mitigated, of an action necessary to preserve or restore the integrity of park resources or values.

#### **4.1 Impacts of Alternative A - (No Action) - Do not allow facility improvements at the Bradbury Beach.**

**4.11 Cultural Resources:** The impact to archaeological and cultural resources from Alternative A will be non-existent. The site would remain in its current condition and only changes due to natural disturbances and normal natural processes would occur.

**4.12 Vegetation:** The impact to vegetation from Alternative A will be minor. The site would primarily remain in its current condition and only changes due to natural disturbances, normal natural processes and some visitor use traffic would occur. On busy days, vegetation along the roadside would continue to be impacted by visitors parking off of the pavement. This would continue to cause damage to the grasses and herbs along the road. In a few areas trees could be damaged by physical contact or compaction of the tree roots.

Currently, social trails exist in some places causing erosion along the road and parking areas. The use of these trails also causes damage to grass and herb vegetation. Implementation of this alternative would not impair park vegetation resources.

**4.13 Sensitive Species:** The impact to sensitive animal species from this Alternative will be non-existent. The site would remain in the current condition. Use of the site by sensitive animal species would be limited by the activities that occur in and around the area. Regular use would preclude use of this site by sensitive animal species.

Implementation of this alternative would result in no impacts to park sensitive species and would not impair park resources.

**4.14 Wildlife:** The impact to wildlife from Alternative A will be non-existent. No measurable impacts to wildlife would occur from this alternative. Wildlife would utilize



this area as they have in the past subject to the occasional disturbance of road traffic, day users, traffic caused by local residents and NPS employees going to and from work.

**4.15 Soils:** The impact to soils from Alternative A will be minor. Minor erosion will continue from the use of social trails in the area. These trails access the beach from the road and parking areas. Continued use reduces the vegetation cover which can create minor erosion in these areas. The amount of erosion may be measurable but it is not considered significant at this time. Natural weather events would continue to affect the soil as it has in the past. Changes may occur from natural disturbances and from natural changes in vegetation patterns.

## **4.2 Impacts of Alternative B (Preferred Action) Facility Improvements proposed by the NPS**

**4.21 Cultural Resources:** Subsurface investigation was conducted to determine if cultural or archaeological features were present within the project area. The NPS is currently conducting a literature search to determine if any historical features found at the southwest corner of the proposed swim beach parking lot expansion have merit to project development. The results of this search will determine the outcome of the parking lot project within the 30 day comment period.

**Mitigation** for this action would require the maintenance equipment operator to monitor the clearing and grading activities. If any indication of archaeological or cultural features should be uncovered or detected, all action shall be stopped and the park archaeologist be notified immediately. If the literature search confirms historical significance, the NPS will develop a mitigation plan for the swim beach parking lot expansion project. The mitigation plan will review alternatives for the area (5 parking stalls) in question to determine the appropriate course of action.

**Indirect Impact:** None identified

**Cumulative Impact:** None identified.

**Impairment finding:** No impacts anticipated. The park's cultural resources would not be impaired by this project.

**4.22 Vegetation:** Approximately 55,000 square feet (1.26 acres of primarily ponderosa pine (21 @ 5-12" DBH), associated grasses, herbs and shrubs will be removed and converted to hardened surfaces. The majority of vegetation removed from this site is fairly common throughout the immediate region and will include grasses and herbs, of which some will be native and some will be exotic.

In the riparian area, some small regenerating cottonwoods and a few willows would be removed to facilitate visitor movement between the day-use area and the beach. Generally speaking, riparian vegetation is lacking on the reservoir as a whole. The work anticipated here will remove only a small portion of mostly regenerating trees and thus should not remove a significant portion of riparian vegetation. The presence of the remaining riparian vegetation will continue to regenerate new vegetation as time goes on.

**Mitigation for Alternative B:** None identified.

**Cumulative Effects:** None identified.

**Impairment finding:** Although this project would have a minor to moderate impact to the vegetation community, the NPS believes that this level of disturbance would not cause impairment to the parks vegetation resource.

**4.23 Sensitive Species:** This site is intermittently visited by wintering bald eagles. Bald eagles regularly use Lake Roosevelt for nesting and mid-winter roosting. The work proposed in the Action Alternatives will be accomplished after late spring or in early fall. This will put the work activity outside of the mid-winter roosting period and thus no mid-winter roosting birds will be disturbed by work activities. None of the trees that are proposed to be removed in the Action Alternatives would make suitable communal roosts at this stage of their development.

Nesting bald eagles are 2.7 kilometers (1.7 miles) away so that the work proposed by this project would be outside the recommended 800 meters (0.5 miles) direct line of site avoidance zone recommended in the Pacific Bald Eagle Recovery Plan<sup>viii</sup>. Since this work will be 3 times the recommended distance and will not involve any out of the ordinary work, this project would have no affect on bald eagles at LRNRA.

In considering this information, the NPS believes this project would have no effect on bald eagle populations of northeast Washington.

The bull trout, a threatened species, is not believed to reproduce or live in Lake Roosevelt, according to Spokane Indian Tribal Fisheries Biologists. Approximately 3 bull trout have been collected in Lake Roosevelt over the last decade and a half of intensive fish surveys conducted by the tribes and their associates (Underwood, 1997)<sup>ix</sup>. The number of bull trout collected compared to the common species encountered during fish surveys is a miniscule fraction of a percent overall. Dr. Al Sholtz, Eastern Washington University, with extensive fishery experience on Lake Roosevelt, believes that lake conditions, such as temperature, are not suitable for the long-term existence of bull trout. It is believed that the fish captured came into the system from tributaries or upstream bodies of water.

In considering this information, the NPS believes this project would have no effect on bull trout populations of northeast Washington.

The Ute ladies'-tresses has never been confirmed in or immediately next to LRNRA. This sensitive plant species is known to exist in non-forested environments subject to occasional disturbance in the flood plain. This project is on an upland slope within a ponderosa pine forest environment. As this area is not in a floodplain like area, is on a slope above the floodplain zone, and in a ponderosa pine environment, the Ute ladies'-tresses would not likely be present. A survey of plants did not reveal any orchid like plants nor did it indicate habitat characteristics that would support the presence of this plant.

In considering this information, the NPS believes this project would have no effect on Ute ladies'-tresses populations of northeast Washington.

**Mitigation for Alternative B.** The only sensitive species identified in the area is the bald eagle. Work will not be accomplished during the mid-winter period of November 15 through February. The nearest nest is 2.7 kilometers away, well out of the recommended 800 meters of direct line of site avoidance zone.

**Cumulative Effects:** None identified.

**Impairment findings:** None identified.

**4.24 Wildlife:** This area is utilized by various wildlife species, some use is dependent on the season. A survey of potential wildlife on this site was not conducted but species dependent on ponderosa pine areas could be expected to be present at various times of the season. Some of the impacts to wildlife will include the removal of 55,000 square feet (1.26 acres) of trees (21 @ 5-12" DBH), associated grasses, herbs and shrubs. This habitat is common in the immediate region and its removal should not measurably impact current use of common animal species.

A portion of the area along the shoreline contains a component of black cottonwood, willow and other non-native trees. The extent of this riparian zone is small, so use by wildlife dependent on this habitat is limited. The amount of riparian vegetation removed will be minor, and includes limbs and small regenerating trees. This disturbance will eventually grow back in a short time, but the openings created will continue to be maintained by park staff.

The work, which will be done in early fall and late spring, may have a minimal effect on wildlife use of this area for the duration of the project. Larger and highly mobile animals, such as deer and birds, will probably leave the immediate area in response to daily work activities. Smaller and less mobile species, such as pocket gophers and mice may leave the immediate work area or may be killed during construction.

**Mitigation for Alternative B.** None identified.

**Cumulative Effects:** None identified.

**Impairment findings:** Although this project would have a minor impact to the wildlife community and the vegetation and its associated wildlife habitat value the NPS believes that this level of disturbance would still not cause impairment to the parks wildlife resource.

**4.25 Soils:** The project encompasses some 55,000 square feet (1.26 acres), with a majority of development occurring near the shoreline. Excavation for parking lots, roads and trails will be graded to a 2% slope with appropriate swales and culverts for runoff control.

**Mitigation** for this action would require a grading plan to provide for a 2% slope that encompasses the existing natural drainage channels for proper runoff into the existing watershed. Seeding the excavated areas with native grasses will avoid erosion and creating water bars on steeper sloped areas to ensure proper drainage.

**Cumulative Effects:** None Identified

**Impairment Findings:** The entire 55,000 square feet of development, a majority of the land affected, is land that has been previously disturbed by the park development. All plants, shrubs, and trees have been re-planted or placed by natural attenuation; therefore no-impairment to soils is anticipated.

**Table 2. Description of Impacts**

|                   | <b>Alternative A</b>   | <b>Alternative B</b>  |
|-------------------|--|---|
| <b>Vegetation</b> | <p>The sites would primarily remain in it's current condition with changes due to natural disturbances, natural processes and visitor traffic. Vegetation along the roadside would continue to be impacted by visitors parking off of the pavement. In a few areas trees could be damaged by physical contact or compaction of the tree roots.</p> <p>Social trails would remain in some places and continue to cause damage to grass and herb vegetation.</p> | <p>Approximately 55,000 square feet (1.26 acres) of primarily ponderosa pine (21 @ 5-12"), associated grasses, herbs and shrubs will be removed and converted to hardened surfaces.</p> <p>In the riparian area some small regenerating cottonwoods and a few willows would be removed to facilitate visitor movement between the day-use area and the beach. Generally speaking riparian vegetation is lacking on the reservoir as a whole. The work anticipated here will remove only a small portion of mostly regenerating trees and thus should not remove a significant portion of riparian vegetation. The presence of the remaining riparian vegetation will continue to regenerate</p> |

Environmental Assessment: Bradbury Beach Facility Improvements  
Lake Roosevelt National Recreation Area

|   |   |  |
|---|---|--|
|   |   | new vegetation as time goes on.  |
| <b>Sensitive species (plants &amp; animals)</b> | The impact from this alternative will be non-existent. The site would remain in the current condition. Use of the site by sensitive animal species would be limited by the activities that occur in and around the campground. Regular use would preclude use of this site by sensitive animal species. | The impact from this alternative will be non-existent. No known sensitive plant species are on the site. The only known sensitive animal species is the bald eagle. It is an intermittent visitor to the area during the winter. The work for this project will occur outside of the wintering period (mid-November thru February)   |
| <b>Wildlife</b>                                 | Impacts will be non-existent. Wildlife would utilize this area as they have in the past subject to the occasional disturbance of road traffic, tent and R/V camping, traffic caused by local residents, and NPS employees performing routine work.  | <p>Species dependent on ponderosa pine areas could be expected to be present at various times of the season. Some of the impacts to wildlife will include the removal of 55,000 square feet (1.26 acres) of trees (21 @ 5-12" dbh), associated grasses, herbs and shrubs.</p> <p>A portion of the area along the shoreline contains a component of black cottonwood, willow and other non-native trees. The extent of this riparian zone is small so it's use by wildlife dependent on this habitat is limited. The amount of riparian vegetation removed will be minor, and includes limbs and small regenerating trees. This disturbance will eventually grow back in a short time but the openings created will continue to be maintained by park staff.</p> <p>The work will also disturb any wildlife use of this area for the duration of the project. Larger and highly mobile animals, such as deer and birds, will probably leave the immediate area in response to daily work activities. Smaller and less mobile species, such as pocket gophers and mice may leave the immediate work area or may be killed during construction.</p> |

|             |  |  |
|-------------|--|--|
| <b>Soil</b> | Minor erosion will continue from the use of social trails in the area. These trails access the beach from the road and parking areas. Continued use reduces the vegetation cover which can create minor erosion in these areas. Natural weather events would continue to affect the soil as it has in the past. Changes may occur from natural disturbances and from changes in vegetation patterns. | The project encompasses some 55,000 square feet (0.8 acre), with majority of development occurring near the shoreline. Excavation for parking lots, roads and trails will be graded to a 2% slope with appropriate swales and culverts for runoff control. |
|-------------|--|--|

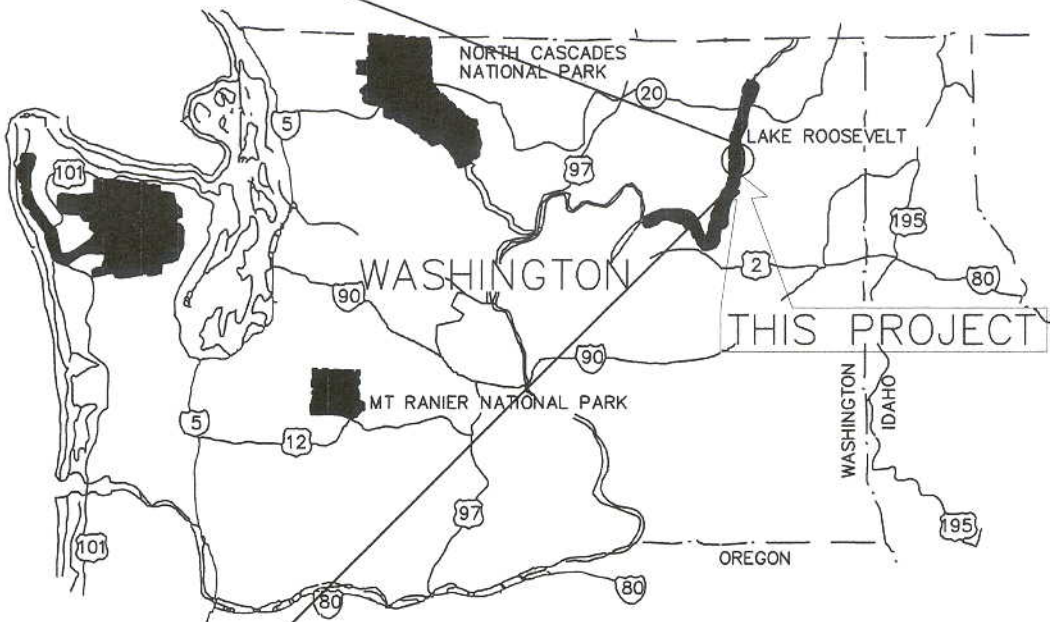
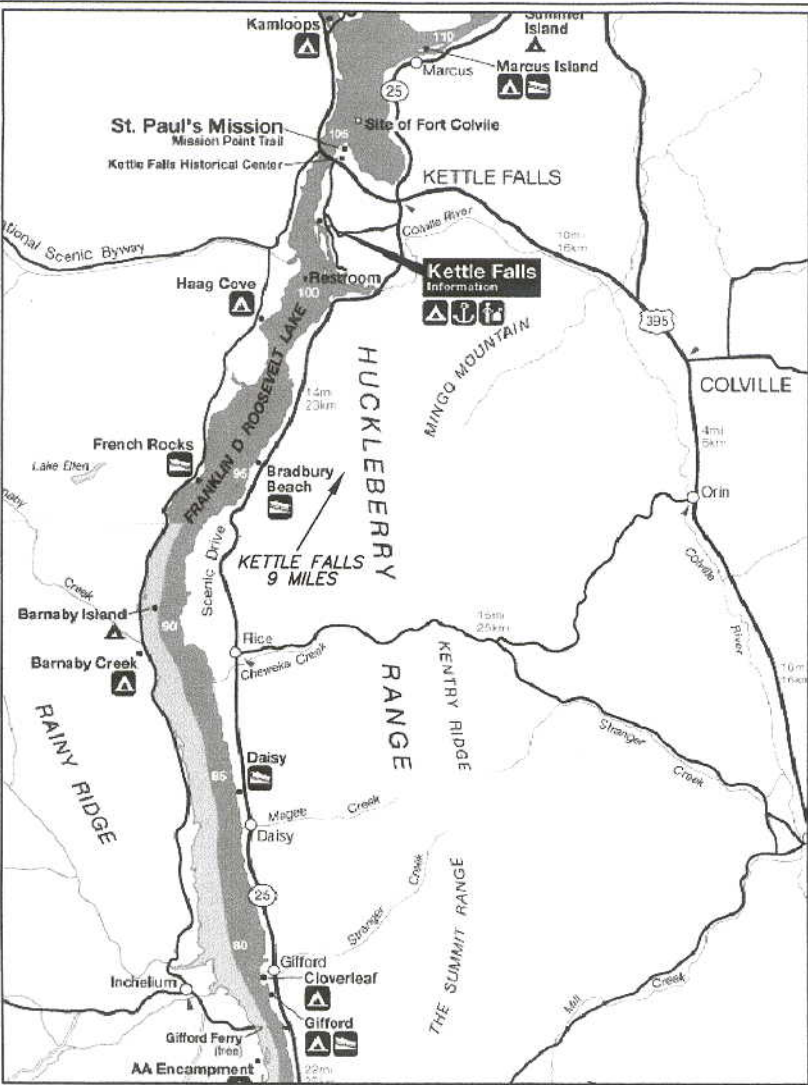
## 5.0 Consultation and Coordination

|                      |  |
|----------------------|--|
| Debbie Bird          | Superintendent                               |
| Ray Dashiell         | Facility Manager                             |
| Ray DePuydt          | Archeologist                                 |
| Scott Hebner         | Natural Resource Specialist, (EA preparer)   |
| John M. Roberts      | Landscape Architect (WSU)                    |
| Nate Krohn           | Landscape Architect (EA Preparer)            |
| Frank B. Andrews Jr. | Planning & Resource Management (EA Preparer) |

This document will be available to the public and comments will be accepted for a minimum of 30 days. After receiving and evaluating public comments if the Superintendent finds that the proposed action will not significantly affect the quality of the human environment a Finding of No Significant Impact (FONSI) will be prepared and forwarded to the Pacific West Regional Director for his approval.

## 6.0 References

- i U.S.D.I. NPS. 2002. Memorandum U.S. Fish and Wildlife Service, Spokane, Washington.
- ii Director's Order #12. 2001. Section 2.7.D.
- iii Depuydt, Ray. 2002. Archaeological Clearance Survey Form (02Laro10) for the proposed improvements at Bradbury Beach Day Use. Report is pending completion, but will be on file at LRNRA, Coulee Dam, Washington.
- iv U.S.D.I. National Park Service. 2001. Management Policies. Washington D.C.
- v U.S.D.I. NPS. 2002. Memorandum U.S. Fish and Wildlife Service, Spokane, Washington.
- vi U.S. Fish and Wildlife Service. 1986. Pacific Bald Eagle Recovery Plan. 8/25/86. Portland, Oregon.
- vii Underwood, Keith. 1997. Personal communication. Spokane Tribal Fisheries Department.
- viii U.S. Fish and Wildlife Service. 1986. Pacific Bald Eagle Recovery Plan. 8/25/86. Portland, Oregon.
- ix Underwood, Keith. 1997. Personal communication. Spokane Tribal Fisheries Department.



BRADBURY BEACH IS  
LOCATED IN STEVENS  
COUNTY AT: T35N R37E  
IN THE NW 1/4 OF THE  
SW 1/4 OF SECTION 22

# BRADBURY BEACH VICINITY MAP NATIONAL PARK SERVICE-WASHINGTON

PREPARED BY: NATIONAL PARK SERVICE  
PLANNING DIVISION  
OCTOBER 2002

SOURCES:  
FIELD CHECK AND OPTICAL RANGING  
AERIAL PHOTOGRAPHY MAY 31, 2001

PLAN VIEW  
NOT TO SCALE



PREPARED  
N.L.K  
DRAWN

CHECKED  
10/01/02  
DATE

REVISED

## BRADBURY BEACH IMPROVEMENTS VICINITY MAP NOT TO SCALE

PROPOSED: SITE IMPROVEMENTS  
IN: FRANKLIN D. ROOSEVELT LAKE  
AT: (NEAR) KETTLE FALLS  
COUNTY: STEVENS STATE: WASHINGTON

APPLICATION BY: U.S. DEPT. OF INTERIOR  
NATIONAL PARK SERVICE

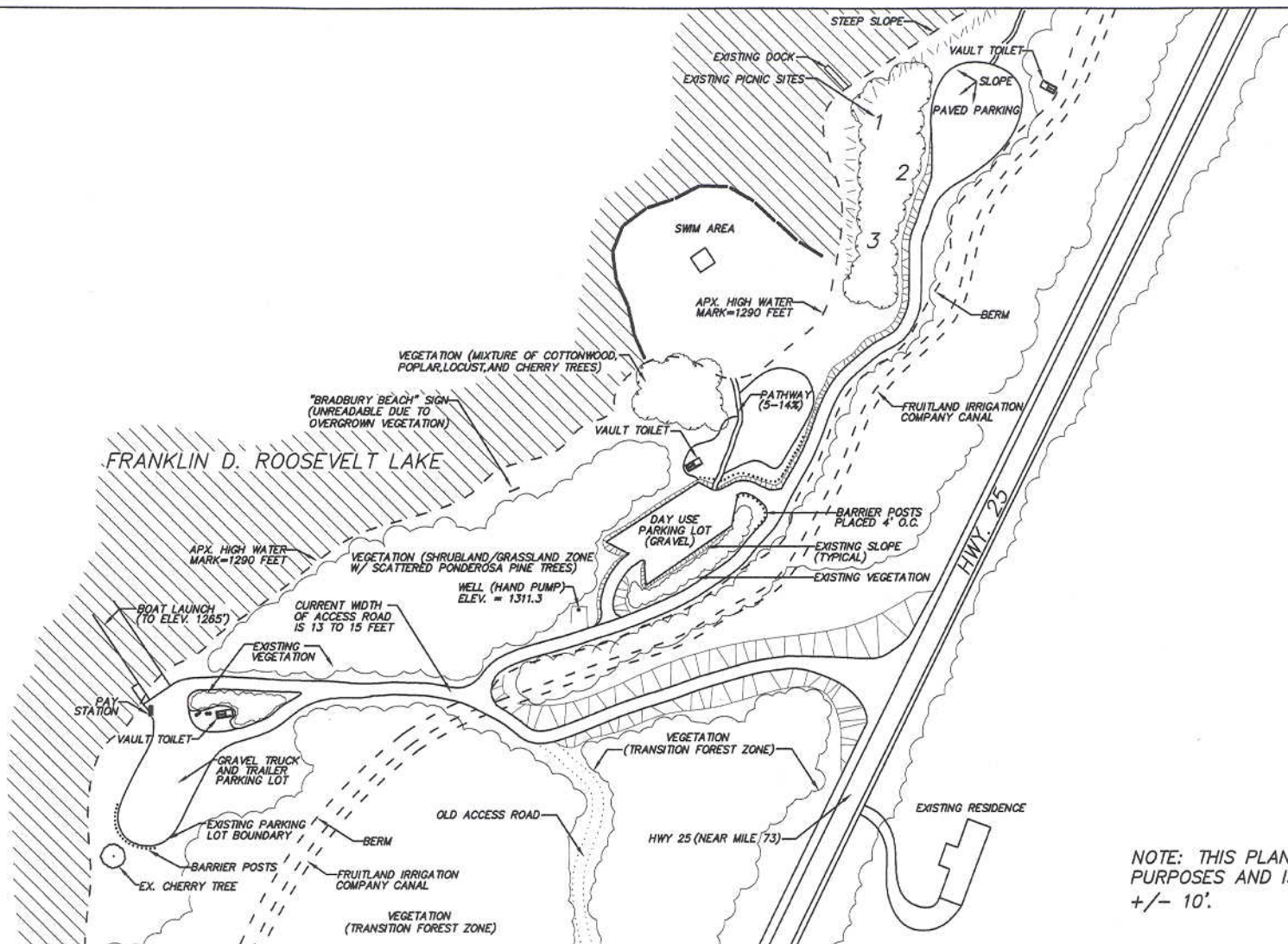
PROPOSED: IMPROVE  
BOAT LAUNCH PARKING  
LOT, DAY USE PARKING  
LOT, PICNIC AREA FOR  
ACCESSIBILITY, ROAD  
WIDTH, VEGETATION  
HEALTH, AND ENTRANCE  
ROAD.

DATUM: NGVD  
ADJACENT PROPERTY  
OWNERS:  
1 PUBLIC LANDS,  
ADMINISTERED BY NPS

DRAWING NO.  
NRA-LARO  
40,023

|             |                |
|-------------|----------------|
| PKG.<br>NO. | SHEET<br>COVER |
| —           | OF —           |



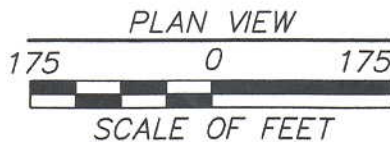


NOTE: THIS PLAN IS FOR CONCEPTUAL PURPOSES AND IS ONLY ACCURATE TO  $\pm 10'$ .

# **BRADBURY BEACH EXISTING CONDITIONS NATIONAL PARK SERVICE-WASHINGTON**

PREPARED BY: NATIONAL PARK SERVICE  
PLANNING DIVISION  
OCTOBER 2002

SOURCES:  
FIELD CHECK AND OPTICAL RANGING  
AERIAL PHOTOGRAPHY MAY 31, 2001



PREPARED  
N.L.K  
DRAWN

CHECKED  
10/01/02  
DATE

REVISED

**BRADBURY BEACH IMPROVEMENTS  
EXISTING CONDITIONS  
SCALE 1"=175'**

PROPOSED: LOCATE EXISTING FACILITIES  
IN: FRANKLIN D. ROOSEVELT LAKE  
AT: (NEAR) KETTLE FALLS  
COUNTY: STEVENS STATE: WASHINGTON

APPLICATION BY: U.S. DEPT. OF INTERIOR  
NATIONAL PARK SERVICE

PROPOSED: LOCATE  
EXISTING STRUCTURES,  
ROADS, VEGETATION,  
PARKING, TRAILS, AND  
BOUNDARIES.

DATUM: NGVD  
ADJACENT PROPERTY  
OWNERS:  
1 PUBLIC LANDS,  
ADMINISTERED BY NPS

DRAWING NO.  
NRA-LARO  
40,023

PKG.  
NO.

SHEET

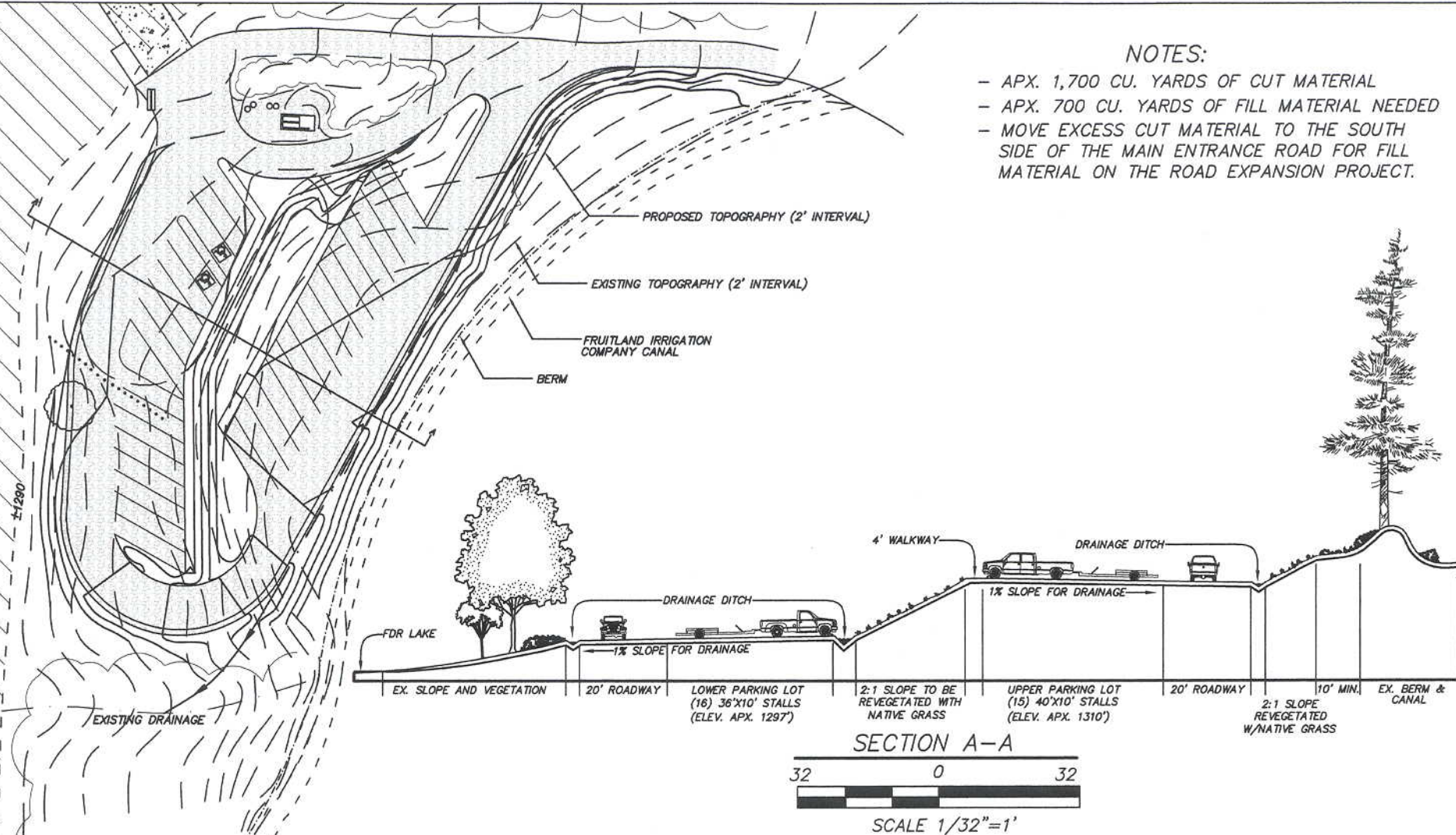
EXISTING  
1

OF 1



# NOTES:

- APX. 1,700 CU. YARDS OF CUT MATERIAL
- APX. 700 CU. YARDS OF FILL MATERIAL NEEDED
- MOVE EXCESS CUT MATERIAL TO THE SOUTH SIDE OF THE MAIN ENTRANCE ROAD FOR FILL MATERIAL ON THE ROAD EXPANSION PROJECT.



## BRADBURY BEACH DAY-USE IMPROVEMENTS ALTERNATIVE B (PREFERRED ALTERNATIVE) NATIONAL PARK SERVICE-WASHINGTON

PREPARED BY: NATIONAL PARK SERVICE  
PLANNING DIVISION  
OCTOBER 2002

SOURCES:  
FIELD CHECK AND OPTICAL RANGING  
AERIAL PHOTOGRAPHY MAY 31, 2001

### PLAN VIEW



NORTH



SCALE OF FEET

PREPARED

N.L.K

DRAWN

CHECKED

10/01/02

DATE

REVISED

## BRADBURY BEACH BOAT LAUNCH PARKING LOT IMPROVEMENTS SCALE VARIES

PROPOSED: PARKING LOT IMPROVEMENTS

IN: FRANKLIN D. ROOSEVELT LAKE

AT: (NEAR) KETTLE FALLS

COUNTY: STEVENS

STATE: WASHINGTON

APPLICATION BY: U.S. DEPT. OF INTERIOR  
NATIONAL PARK SERVICE

PROPOSED: REMOVE  
VEGETATION AND BARRIER  
POSTS AS NEEDED. GRADE  
SITE, ADD COMPACTED  
GRAVEL BASE. ADD  
BARRIER LANDSCAPE  
ROCKS AS NEEDED. WIDEN  
EXISTING ROADWAY WHERE  
FEASIBLE.

DATUM: NGVD  
ADJACENT PROPERTY  
OWNERS:  
1 PUBLIC LANDS,  
ADMINISTERED BY NPS

DRAWING NO.

NRA-LARO  
40,023

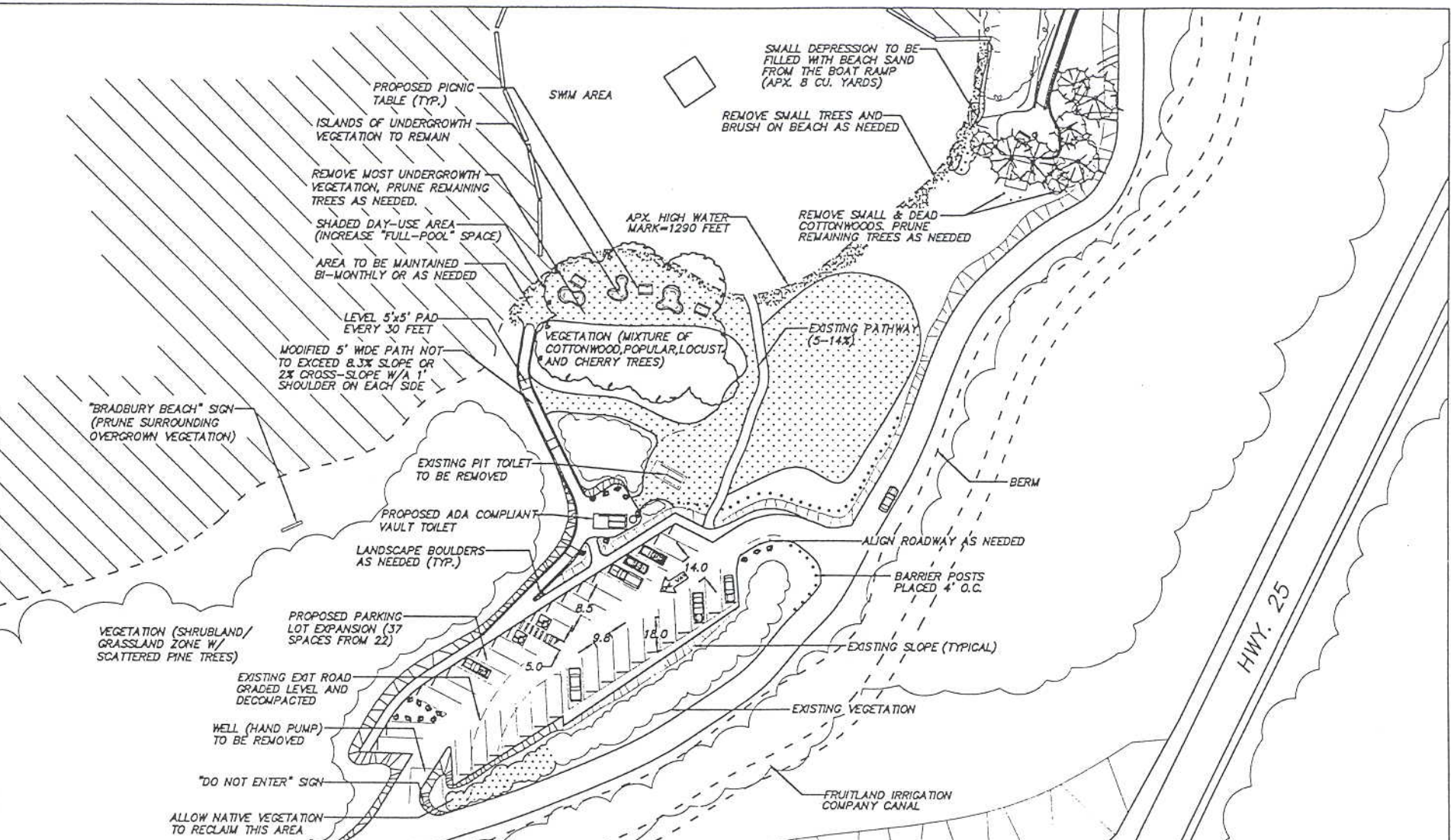
PKG.  
NO.

SHEET

2

OF 4





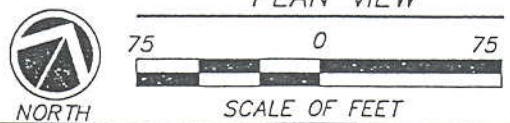
**BRADBURY BEACH  
DAY-USE IMPROVEMENTS  
ALTERNATIVE B (PREFERRED ALTERNATIVE)**  
NATIONAL PARK SERVICE-WASHINGTON  
PREPARED BY: NATIONAL PARK SERVICE  
PLANNING DIVISION  
OCTOBER 2002  
SOURCES:  
FIELD CHECK AND OPTICAL RANGING  
AERIAL PHOTOGRAPHY MAY 31, 2001

PREPARED  
N.L.K.  
DRAWN  
  
CHECKED  
10/01/02  
DATE  
  
REVISED

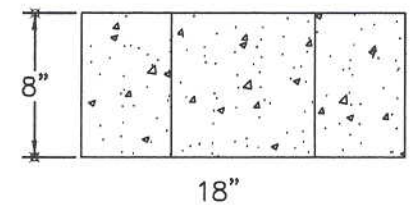
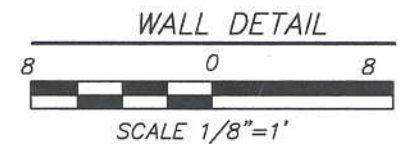
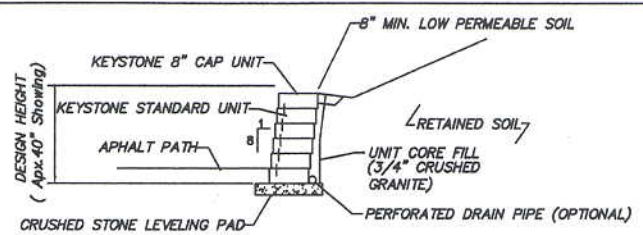
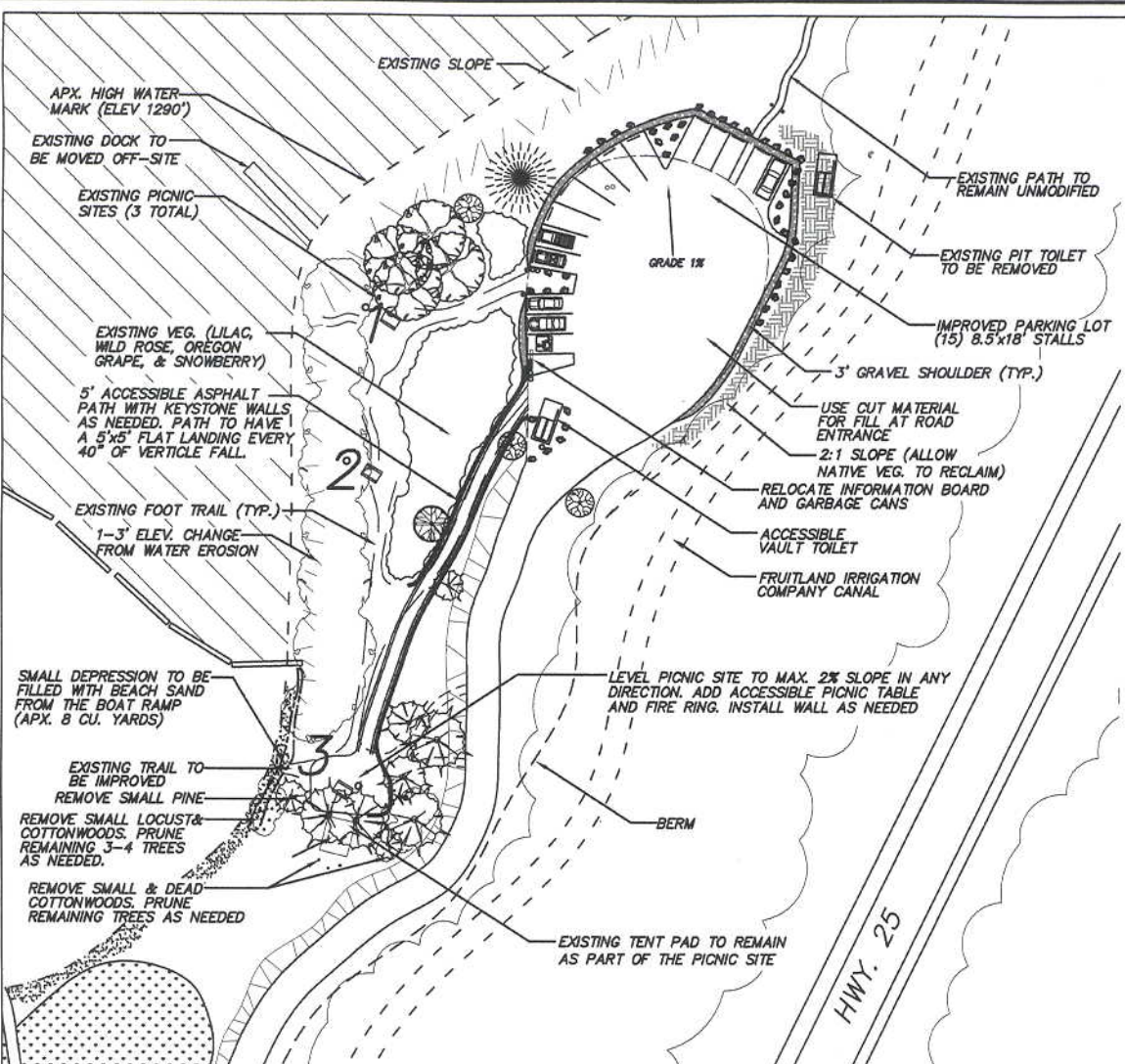
**BRADBURY BEACH DAY USE  
PARKING LOT IMPROVEMENTS**  
SCALE: 1"=75'  
  
PROPOSED: SWIM BEACH AREA IMPROVEMENTS  
IN: FRANKLIN D. ROOSEVELT LAKE  
AT: (NEAR) KETTLE FALLS  
COUNTY: STEVENS STATE: WASHINGTON  
  
APPLICATION BY: U.S. DEPT. OF INTERIOR  
NATIONAL PARK SERVICE

PROPOSED: REMOVE  
EXISTING WATER SYSTEM  
COMPONENTS. GRADE SITE  
AS NEEDED, BALANCING  
CUT AND FILL MATERIAL.  
DEVELOP ADA COMPLIANT  
PATH TO THE SWIM  
BEACH. PROVIDE SIGNAGE  
AS NEEDED.  
  
DATUM: NGVD  
ADJACENT PROPERTY  
OWNERS:  
1 PUBLIC LANDS,  
ADMINISTERED BY NPS

DRAWING NO.  
NRA-LARO  
40,023  
  
PKG. NO. SHEET  
3  
OF 4





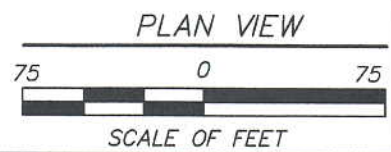


BLOCK DETAILS  
NOT TO SCALE

NOTES:

- MOVE EXCESS CUT MATERIAL TO THE SOUTH SIDE OF THE MAIN ENTRANCE ROAD FOR FILL MATERIAL ON THE ROAD EXPANSION PROJECT (APX. 3,000 CU YDS. OF MATERIAL NEEDED). EXCESS MATERIAL=APX. 1,500 CU YDS FROM THIS PROJECT.

**BRADBURY BEACH  
DAY-USE IMPROVEMENTS  
ALTERNATIVE B (PREFERRED ALTERNATIVE)  
NATIONAL PARK SERVICE-WASHINGTON**  
PREPARED BY: NATIONAL PARK SERVICE  
PLANNING DIVISION  
OCTOBER 2002  
SOURCES:  
FIELD CHECK AND OPTICAL RANGING  
AERIAL PHOTOGRAPHY MAY 31, 2001



PLAN VIEW

PREPARED  
N.L.K  
DRAWN

CHECKED  
10/01/02  
DATE

REVISED

**BRADBURY BEACH DAY USE AREA  
TRAIL AND SITE IMPROVEMENTS  
SCALE VARIES**

PROPOSED: DAY-USE IMPROVEMENTS  
IN: FRANKLIN D. ROOSEVELT LAKE  
AT: (NEAR) KETTLE FALLS  
COUNTY: STEVENS STATE: WASHINGTON

APPLICATION BY: U.S. DEPT. OF INTERIOR  
NATIONAL PARK SERVICE

PROPOSED: CONSTRUCT  
KEYSTONE WALL AND  
ADA ACCESSIBLE PATH.  
GRADE SITE, ADD  
GRAVEL BASE, INSTALL  
BARRIER LANDSCAPE  
ROCKS AS NEEDED. WIDEN  
EXISTING ROADWAY WHERE  
FEASIBLE. IMPROVE SWIM  
BEACH AS NOTED.

DATUM: NGVD  
ADJACENT PROPERTY  
OWNERS:  
1 PUBLIC LANDS,  
ADMINISTERED BY NPS

DRAWING NO.  
NRA-LARO  
40,023

PKG. NO. SHEET  
4  
OF 4